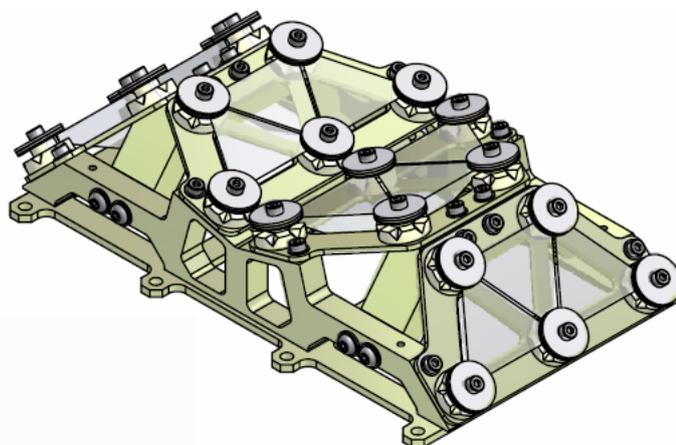


ILRS SLR Mission Support Request Form
Retroreflector Information

Satellite Name	SOHLA-1
Contact for Retroreflector Information	(1 st) Keisuke Yoshihara (2 nd) Shinichi Nakamura
Phone Number	+81-29-868-2180 (Yoshihara) +81-29-868-2625 (Nakamura)
E-mail Address	Yoshihara.keisuke@jaxa.jp Nakamura.shinichi@jaxa.jp

1. Array Type (spherical, hexagonal, planar, etc) to include a diagram or photograph
Modified hexagonal array. Laser reflector consists of 12 prisms.



2. Array manufacturer

Space Technology Demonstration Research Center, JAXA

3. Link (URL or reference) to any ground-tests that were carried out on the array

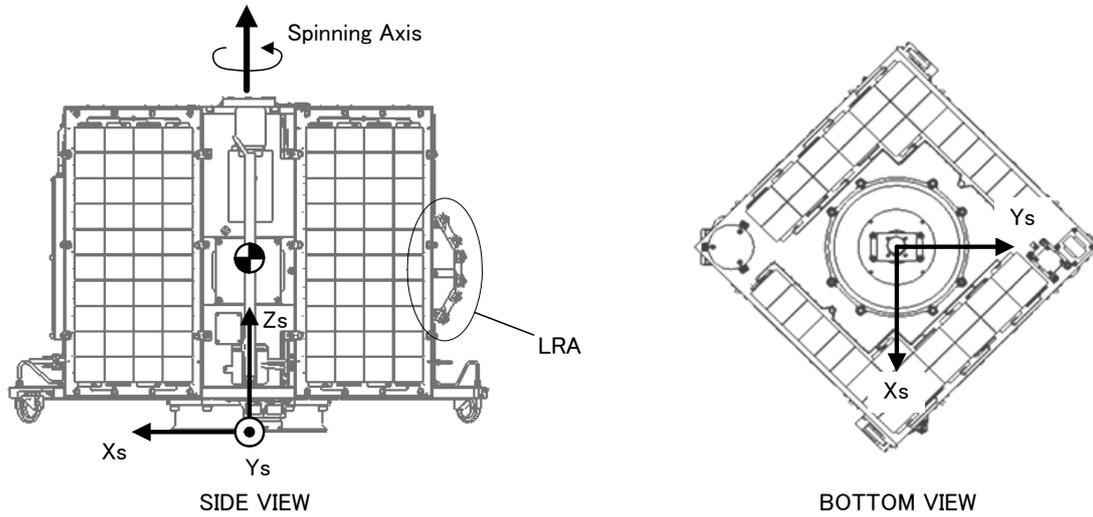
Since this LRA is same as AJISAI, the LRA's performance, such as optical test, ground test, and environment testing, have already evaluated. Therefore, we did not perform performance test.

4. The LRA design and/or type of cubes was previously used on the following missions:

Prisms are same as Ajisai and LRE.

5. The 3-D location (possibly time dependent) of the satellite's mass center relative to a satellite-based origin:

The position of the satellite's mass center relative to the satellite system coordinate shown in the following figure is: $(x, y, z) = (+4.0, -4.0, +255)$ [unit: mm].

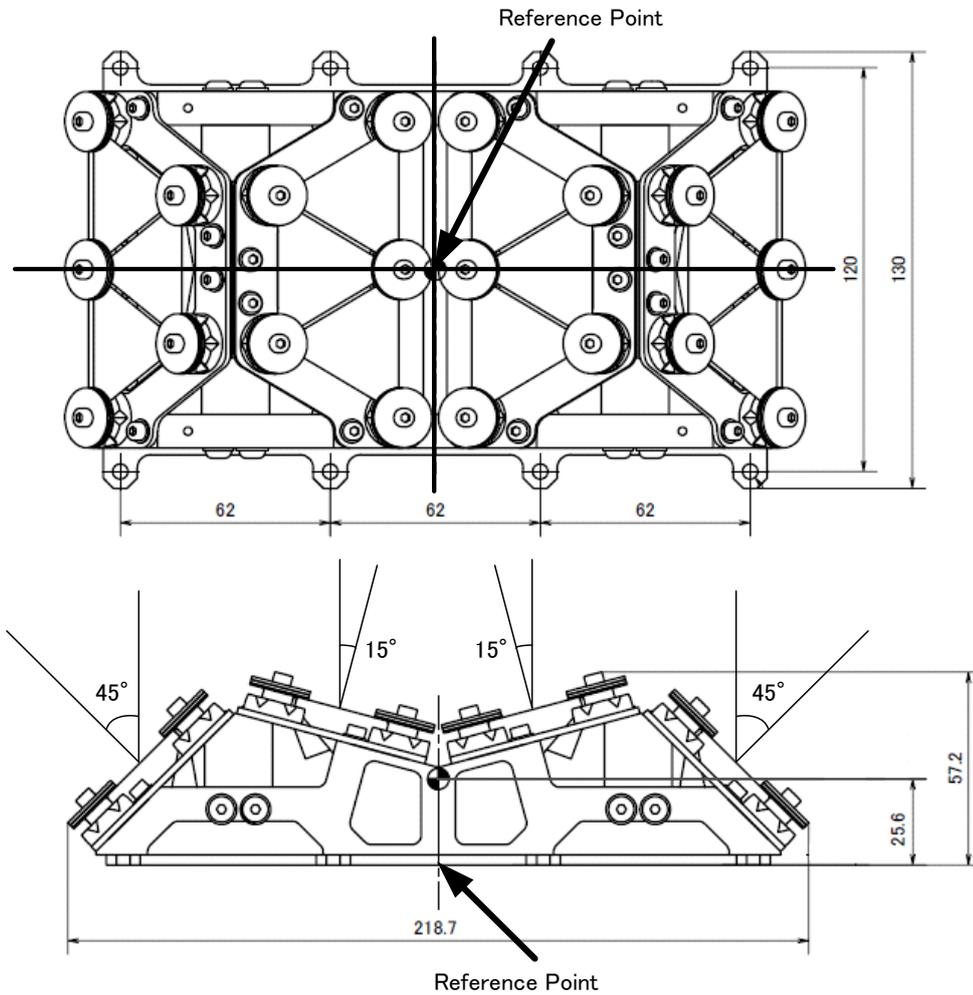


6. The 3-D location of the phase center of the LRA relative to a satellite-based origin:

TBD

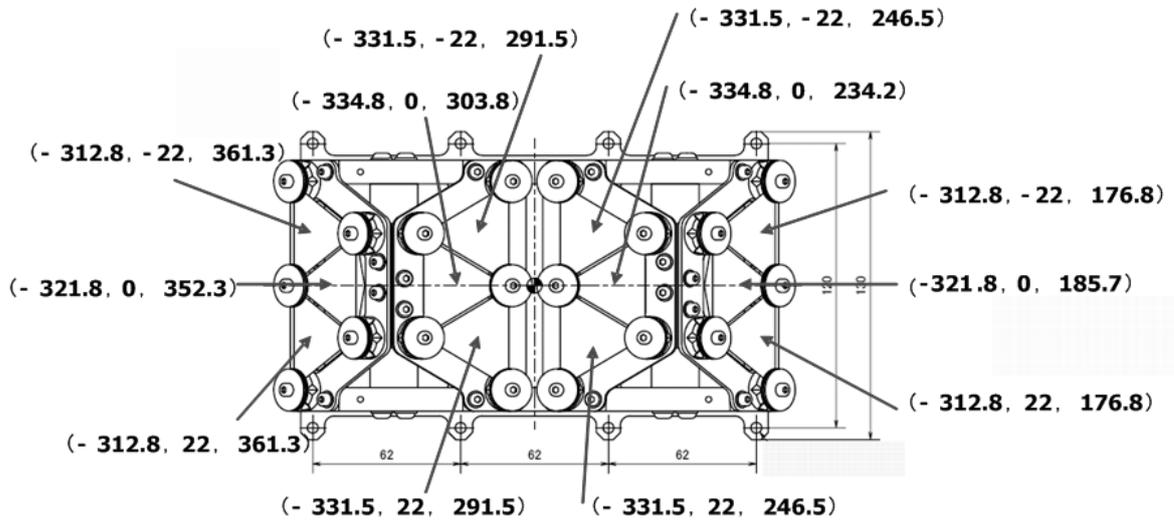
7. The position and orientation of the LRA reference point (LRA mass-center or marker on LRA assembly) relative to a satellite-based origin:

The position of the LRA reference point shown in the following figure is: $(x, y, z) = (-286.8, +55, +269)$ [unit: mm].

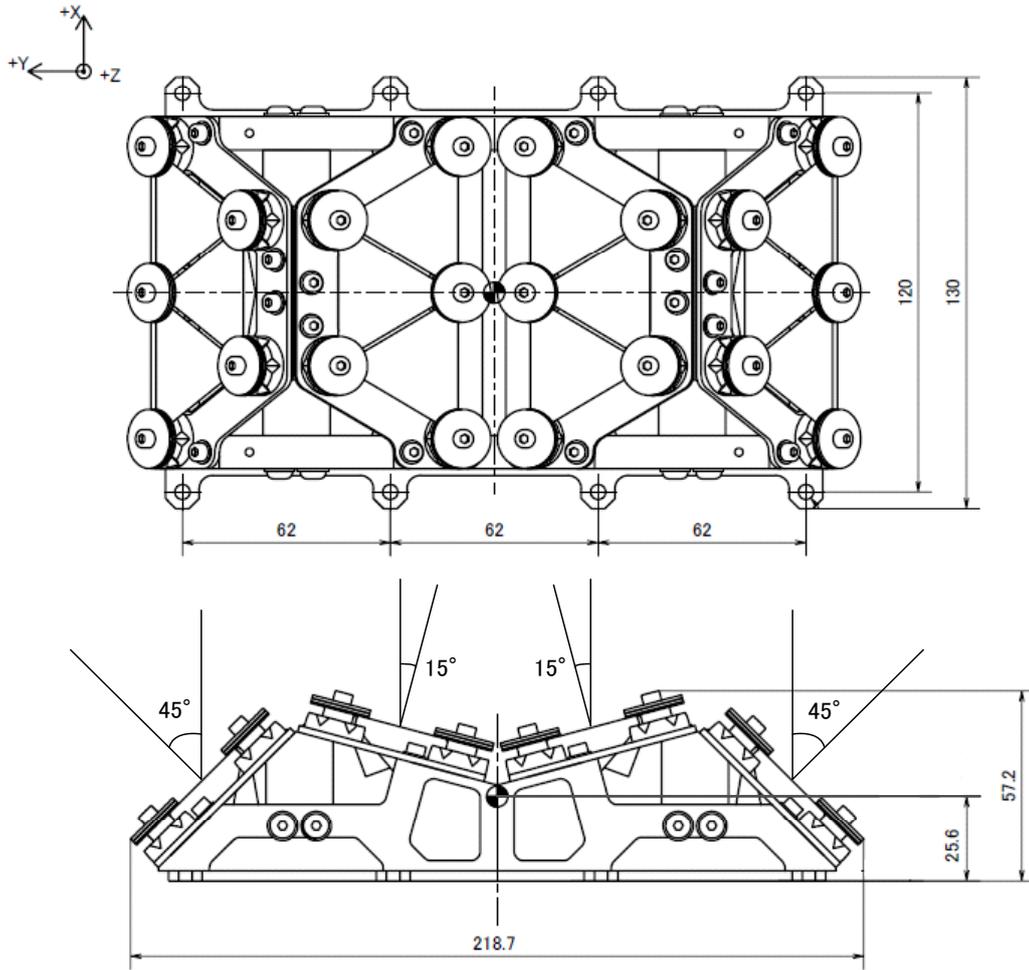


8. The position (x, y, z) of either the vertex or the center of the front face of each corner cube within the LRA assembly, with respect to the LRA reference point and including information of amount of recession of front faces of cubes:

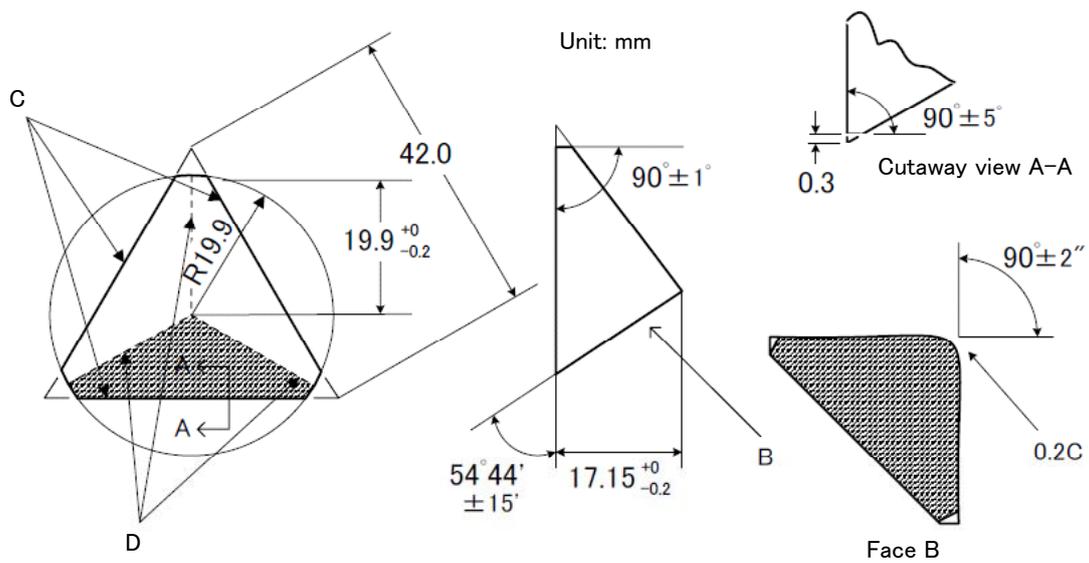
The position of the center of the front face of each corner cube is shown in the following figure.



9. The orientation of each cube within the LRA assembly (three angles for each cube):



10. The shape and size of each corner cube, especially the height:



11. The material from which the cube are manufactured (e.g. quartz)
Material: BK7
12. The refractive index of the cube material, as a function of wavelength λ (micron)
n=1.51872 for 546.1 nm
13. Dihedral angle offset(s) and manufacturing tolerance:
We did not consider dihedral angle.
14. Radius of curvature of front surface of cubes, if applicable:
Not applicable.
15. Flatness of cubes' surfaces (as a fraction of wavelength)
$\lambda/10$
16. Whether or not the cubes are coated and with what material:
Non coated cubes